Name:_____

Evaluate:

a) $\lim_{x\to -7} \frac{x^2+10x+21}{x^2-49}$

$$= \lim_{x\to -7} \frac{(x+7)(x+3)}{(x+7)(x-7)}$$

$$= \lim_{x\to -7} \frac{x+3}{x-7}$$

$$= \frac{-4}{-14}$$

$$= \frac{2}{7}$$

b) $\lim_{x\to 0} \frac{x^2-3x}{x^2+8x}$

$$= \lim_{x\to 0} \frac{x(x-3)}{x(x+8)}$$

$$= \lim_{x\to 0} \frac{x-3}{x+8}$$

$$= \frac{-3}{8}$$